inSentry II
User's Guide
Smart Solution for Your Wide Monitoring

inSentry II

User's Guide

Version 1.0

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Electronic Emission Notice

Federal Communications Commission

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

CE Notice

This device complies with the EMC directive of the European Community and meets or exceeds the following technical standard:

- EN 55022:1998 – “Limits and Methods of Measurement of Radio interference Characteristics of information Technology Equipment.” This device complies with the CISPR Class B standard.
- EN 55024:1998 – ”Electromagnetic compatibility – Generic immunity standard Part1: Residential, and light industry.”

RoHS

This device is RoHS compliant.

Safety Information

- To reduce the risk of fire or electric shock, install the unit in a temperature-controlled indoor area free of conductive contaminants. Do not place the unit near liquids or in an excessively humid environment.
- Do not allow liquids or foreign objects to enter the unit.
- The unit does not contain any user-serviceable parts. Do NOT open the unit.
- All the services of this equipment must be performed by qualified service personnel.
- Remove all metallic jewelry or other accessories before servicing the unit.
- Before maintenance, repair or shipment, the unit must be completely switched off and unplugged and all connections must be removed.
- Before connecting the inSentry II to the power supply, make sure the rating of power source is consistent with the rating of power adapter of the inSentry II.

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1 Introduction

The inSentry II is a connectivity device that supports and monitors various environmental sensors, such as temperature/ humidity sensor, vibration sensor, smoke detector, and water leak sensor etc. Output relays and DC voltage sensor are also supported to trigger extended devices by events, providing powerful management control and flexible monitoring.

1.1 Features

The inSentry II supports the following features:

- **Hot-swapping**

  You can install the EMDs safely without powering down the inSentry II.

- **Temperature and humidity monitoring**

  You can monitor the temperature and humidity of any desired environment to protect critical equipment.

- **Contact closure status monitoring**

  You can monitor the status of up to four contact devices to protect your critical equipment.

- **The inSentry II functions configuration from any client (password protected)**

  You can set the inSentry II settings from any SNMP management station or by web browser using HTTP forms and objects.

- **E-mail notification**

  Supports e-mail notification through SMTP via e-mail client software, phone, or alphanumeric pager when alarms are triggered or contact status changes.

- **History logs and events**

  When the temperature and humidity values exceed the user-defined limits, or the status of the contact closure

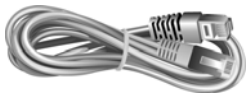
changes, the logs are recorded in the History Log of the inSentry II.

1.2 Package Contents

inSentry II box

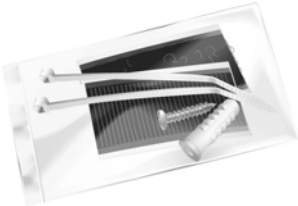
EMD box (environment monitoring device)

RJ45 to DB9 female serial cable for inSentry II console operation



RJ45 to RJ45 male cable for EMD connection

12V DV power adapter



Accessory bag (containing cable tie, Velcro, and machine screw)

CD-ROM (containing MIB file for SNMP Network Management System, Quick Installation Guide, and User's Guide)

Quick Installation Guide

1.3 Front View

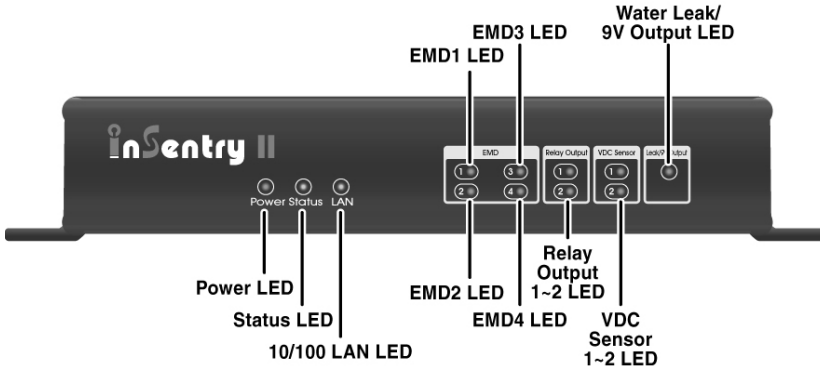


Figure 1-1 inSentry II front view

1.4 Rear View

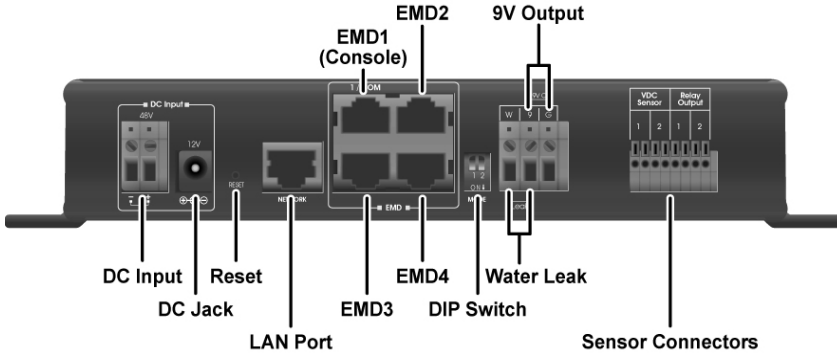


Figure 1-2 inSentry II rear view

2 Installation

To install the inSentry II on a network and change its configuration, you need a workstation running Microsoft Windows (2000, XP or later). There are two ways to configure the inSentry II:

1. By connecting the inSentry II to the serial port of a workstation.
2. By connecting the inSentry II to LAN.

2.1 Installing inSentry II via Serial Port

Follow the steps below to install the inSentry II via the serial port.

1. Connect the supplied RJ45/DB9 (M) serial cable from the RJ45 connector labeled “EMD-1” of the inSentry II to the COM port on the workstation.

Figure 2-1 Connect inSentry II to workstation

2. Connect the supplied CAT 5 network cable from any RJ45 connector labeled “EMD-2, 3, or 4” of the inSentry II to the port labeled “010101” on an EMD.

Figure 2-2 Connect inSentry II to EMD

3. Insert the power connector to the inSentry II power inlet. Then plug the power adapter of the inSentry II into the power socket.

Figure 2-3 Connect the power connector

Note: You can select to use either the power adapter or the 48V DC power source to supply power to the inSentry II.

Upon successful connection, you can configure the inSentry II from the workstation connected directly to the inSentry II. For further details, please refer to Chapter 3.1.

2.2 Installing inSentry II via LAN

Follow the steps below to install the inSentry II via LAN connection.

1. Prepare a workstation with web browser installed and connected to LAN.

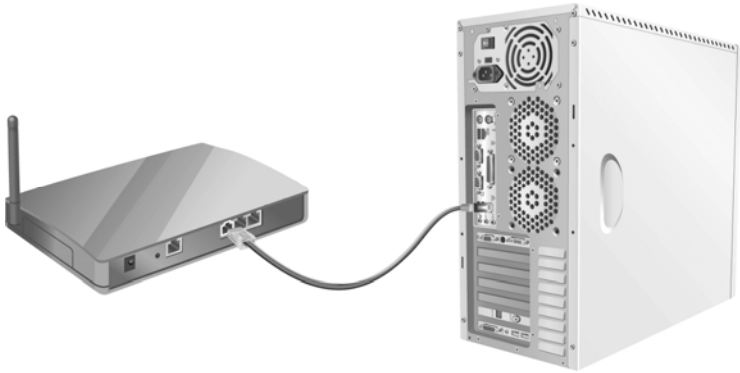


Figure 2-4 Connect workstation to hub

2. Connect the inSentry II to the same LAN of the workstation via the network cable (twisted-pair cable) from the LAN port.

Figure 2-5 Connect inSentry II to hub

3. Set the DIP switches of the inSentry II to **OFF** by moving the switches upward.

Figure 2-6 Set DIP switches to OFF

4. Insert the power connector to the inSentry II power inlet. Then plug the power adapter of the inSentry II into the power socket.

Figure 2-7 Connect the power connector

Note: You can select to use either the power adapter or the 48V DC power source to supply power to the inSentry II.

Upon successful connection, you can configure the inSentry II via the web browser from any workstation connected to the same LAN of the inSentry II. For further details, please refer to Chapter 3.2.

2.3 LED Definitions

When you have successfully installed and powered on the inSentry II, check the LED indicators to ensure it is operating properly.

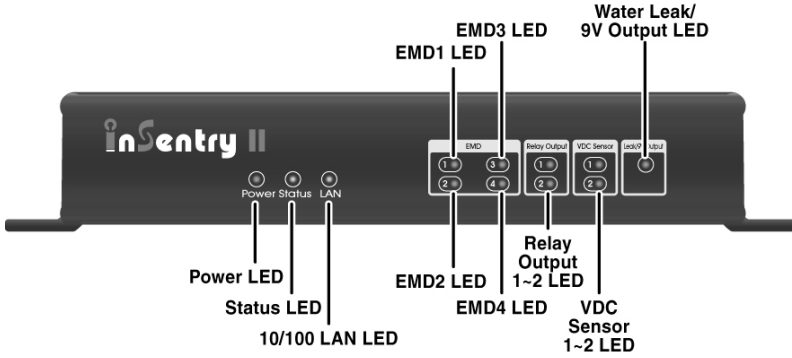


Figure 2-8 inSentry II front panel LEDs

1. Power and Status LEDs

Power (Yellow LED)	Status (Green LED)	Function
ON	--	Power ON
ON	Flashing	Alarm active
OFF	Flashing	Serial upgrade mode
ON	ON	Hardware error
Two LEDs flash alternatively		Auto-diagnostic mode

2. LAN LED

Green	Yellow	Function
OFF	OFF	Ethernet disconnected
OFF	ON	Ethernet 10 ready
ON	OFF	Ethernet 100 ready
Flashing	OFF	Ethernet 100 traffic
OFF	Flashing	Ethernet 10 traffic

3. LED of all sensors (EMD, VDC sensors, water leak/ 9V output)

LED Status	Function
OFF	The sensor is disabled via Configuration page.
ON	The sensor is enabled via Configuration page.
Flashing	An alarm is triggered.

4. LED of relay outputs

LED Status	Function
OFF	The output device is disabled via Configuration page.
ON	The output device is enabled via Configuration page.
Flashing	The output device is active.

Note: If the EMD, VDC sensor or Water Leak Sensor is enabled from the Configuration page but the device is not connected, it is considered as an alarm of communication loss. Therefore, the LED will be flashing.

3 Configuration

3.1 Configuring inSentry II via Serial Port

Follow the steps below to configure the inSentry II via the serial port.

1. On the workstation that the inSentry II is directly connected to, run **HyperTerminal** from Start > Programs > Accessories > HyperTerminal.

Note: The screens and instructions in this section are for reference only. Screens and the path of HyperTerminal may differ according to your Windows version.

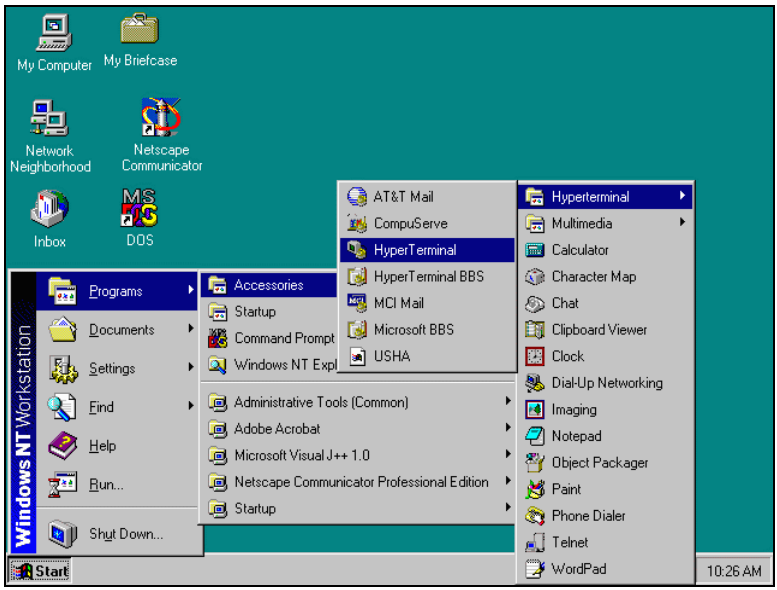


Figure 3-1 Select HyperTerminal from the Start menu

2. Enter a name and choose an icon for the connection.

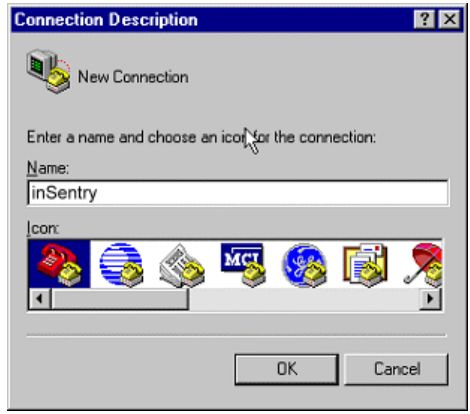


Figure 3-2 Create new HyperTerminal connection

3. Select direct COM port connection.

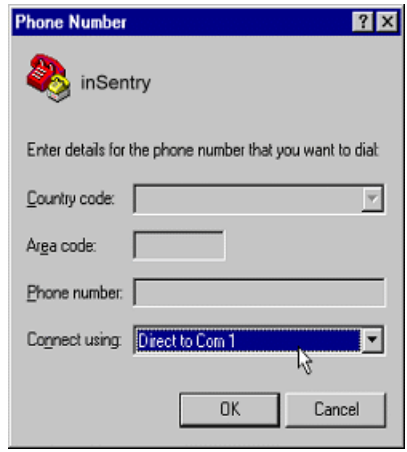


Figure 3-3 Select direct COM port connection

4. Set the COM port parameters: **9600 bps**, **8 data bits**, **no parity**, **1 stop bit**, and **no flow control**.

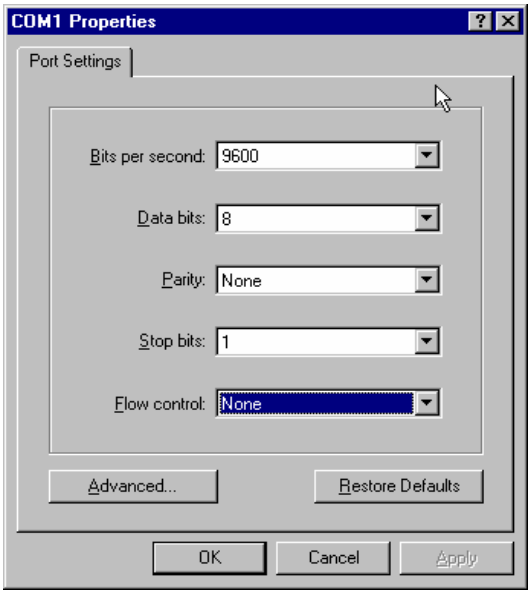


Figure 3-4 Set COM port parameters

5. Press **Enter** and a message will be displayed. Enter the password (default password is **admin**).

```
+============================================================================+
!             [ inSentry II Configuration Utility Main Menu ]                !
+============================================================================+

Enter Password: *****_
```

Figure 3-5 Enter password

6. The inSentry II configuration utility main menu will be shown.

```
+=============================================================================+
¦             [ inSentry II Configuration Utility Main Menu ]                 ¦
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => _
```

Figure 3-6 inSentry II configuration utility main menu

3.1.1 inSentry II Configuration

You can configure the inSentry II configuration, EMD configuration, access control table, trap receiver table, reset configuration to default, and restart the inSentry II.

```
+=============================================================================+
¦             [ inSentry II Configuration Utility Main Menu ]                 ¦
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => 1


+=============================================================================+
¦                    [ inSentry II Configuration Menu ]                       ¦
+=============================================================================+
   1. System Group
   2. Control Group
   3. Parameter Group
   0. Return to previous menu

Please Enter Your Choice => _
```

Figure 3-7 Select inSentry II configuration

3.1.1.1 Setting System Group

From the configuration menu, press **1** to select this function and set the IP address, gateway address, and network mask.

```
+============================================================================+
|                    [ inSentry II Configuration Menu ]                      |
+============================================================================+
   1. System Group
   2. Control Group
   3. Parameter Group
   0. Return to previous menu

Please Enter Your Choice => 1


+============================================================================+
|                    [ System Group Configuration Menu ]                     |
+============================================================================+
      inSentry II Version : inSentry II v1.01 (SN pm0708003)
      Ethernet address    : 00 E0 D8 FF A4 ED
   1. Ip Address          : 192.168.68.14
   2. Gateway Address     : 192.168.1.254
   3. Network Mask        : 255.255.0.0
   0. Return to previous menu

Please Enter Your Choice => _
```

Figure 3-8 System group configuration menu

After completing these settings, press **0** to return to the configuration menu.

3.1.1.2 Setting Control Group

From the configuration menu, press **2** to modify the HTTP login name and password, and enable or disable the status of the available network protocols. After completing these settings, press **0** to return to the configuration menu.

```
+============================================================================+
|                    [ Control Group Configuration Menu ]                    |
+============================================================================+
   1. HTTP Login Username   : inSentry II
   2. Community Read-Only   : public
   3. Community Read/Write  : *
   4. BOOTP/DHCP Control    : Disable
   5. TFTP Upgrade Control  : Enable
   6. PING Echo Control     : Enable
   7. Telnet Control
   8. HTTP Control
   9. SNMP Control
   0. Return to previous menu

Please Enter Your Choice => _
```

Figure 3-9 Control group configuration menu

No.	Function	Description	Default
1	HTTP Login Username	Set the HTTP login name	inSentry II
2	Community Read-Only	Set the general password for read-only access	public
3	Community Read/Write	Set the administrator password for read and write access	admin
4	BOOTP/DHCP Control	Enable or disable the BOOTP/ DHCP protocols	Enable
5	TFTP Upgrade Control	Enable or disable the TFTP protocol for firmware upgrades through the local network	Enable
6	PING Echo Control	Enable or disable the inSentry II to response to Ping request	Enable
7	Telnet Control	Enable or disable the TELNET protocol	Enable
8	HTTP Control	Enable or disable login and password request for HTTP access	Enable
9	SNMP Control	Enable or disable login and password request for SNMP access	Enable

3.1.1.3 Setting Parameter Group

From the configuration menu, press **3** to modify the SNMP identification information and the speed of reading data from the inSentry II. After completing these settings, press **0** to return to the configuration menu.

```
+=============================================================================+
¦                  [ Parameter Group Configuration Menu ]                     ¦
+=============================================================================+
   1. sysContact      : Technical Support
   2. sysName         : inSentry II
   3. System Location :
   4. Poll Rate       : 5
   0. Return to previous menu

Please Enter Your Choice => _
```

Figure 3-10 Parameter group configuration menu

No.	Function	Description	Default
1	sysContact	Alphanumeric string	Technical Support
2	sysName	Alphanumeric string	inSentry II
3	System Location	Alphanumeric string	Technical Support Lab.
4	Poll Rate	The time interval in seconds which the inSentry II updates the measurement (temperature and humidity) from the sensor; the valid value is from 3 to 60.	5

3.1.2 EMD Configuration

To change the EMD configuration, press **2** from the main menu.

```
+=============================================================================+
¦             [ inSentry II Configuration Utility Main Menu ]                 ¦
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => 2
```

Figure 3-11 Select EMD configuration

You can change the EMD, VDC, and water leak settings, and configure the EMD temperature unit and the date format of the system in this section.

```
+=============================================================================+
|                          [ EMD Configuration Menu ]                         |
+=============================================================================+
   1. EMD-1 Setup
   2. EMD-2 Setup
   3. EMD-3 Setup
   4. EMD-4 Setup
   5. VDC-1 Setup
   6. VDC-2 Setup
   7. Water Leak Setup
   8. EMD Temperature Unit : Celsius
   9. Date Format          : dd/mm/yyyy
   0. Return to previous menu

Please Enter Your Choice => _
```

Figure 3-12 EMD configuration menu

Press **1**, **2**, **3**, or **4** for configurations of the corresponding EMD.

```
 +=============================================================================+
 |                              [ EMD-1 Setup ]                                |
 +=============================================================================+
    1. EMD-1 Status : Auto
    2. EMD-1 Name   : SENSOR 1
    0. Return to previous menu

 Please Enter Your Choice =>
```

Figure 3-13 EMD setup

Press **5** or **6** for VDC setup of VDC1 or 2.

```
+=============================================================================+
|                              [ VDC-1 Setup ]                                |
+=============================================================================+
   1. VDC-1 Status : Enabled
   2. VDC-1 Name   : VDC SENSOR 1
   0. Return to previous menu

Please Enter Your Choice => _
```

Figure 3-14 VDC setup

Press **6** for water leak setup.

```
+=============================================================================+
|                            [ Water Leak Setup ]                             |
+=============================================================================+
   1. Water Leak Status : Disabled
   2. Water Leak Name   : Water Leak
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 3-15 Water leak setup

Press **8** to change EMD temperature unit. You can select **Celsius** or **Fahrenheit**.

```
Please Enter Your Choice => 8
EMD Temperature Unit - [Celsius]
   1. Celsius
   2. Fahrenheit

Please Enter Your Choice => _
```

Figure 3-16 EMD temperature unit

Press **9** for date format configuration.

```
Date Format Configuration - [dd/mm/yyyy]
   1. dd/mm/yyyy
   2. mm/dd/yyyy

Please Enter Your Choice =>
```

Figure 3-17 Date format configuration

3.1.3 Setting Access Control Table

To use a workstation with SNMP Manager installed, or to set more restrictive inSentry II access, you can add the IP address of the workstation to the access table and modify the access permission.

Note: The settings of Access Control Table are configured for SNMP and HTTP network management. Access through Telnet or RS-232 is permitted only when using the “Community Read/Write” password in Control Group.

Press **3** from the main menu to select Access Control Table.

```
+=============================================================================+
|             [ inSentry II Configuration Utility Main Menu ]                 |
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => 3
```

Figure 3-18 Select access control table

```
+=============================================================================+
|   IP Address       Community String         Access                          |
+=============================================================================+
[1] 0.0.0.0          public                   NotAccess
[2] 0.0.0.0          public                   NotAccess
[3] 0.0.0.0          public                   NotAccess
[4] 0.0.0.0          public                   NotAccess
[5] 0.0.0.0          public                   NotAccess
[6] 0.0.0.0          public                   NotAccess
[7] 0.0.0.0          public                   NotAccess
[8] 0.0.0.0          public                   NotAccess

   COMMANDS -
   1. Modify - Modify an entry of table
   2. Reset - Reset an entry to default from table
   0. Return to previous menu

Please Enter Your Choice =>
```

Figure 3-19 Access control table

Note: The community strings entered in the Community String field are visible only in the RS-232 connection. The Telnet connection does not display the string. An asterisk “*” will be shown in the field.

If “NotAccess” access right is associated with an IP address, the workstation using that IP will not be able to display any information regarding the inSentry II, even if the Community Read-Only string is entered.

3.1.4 Setting Trap Receivers

Press **4** from the main menu to select trap receiver table.

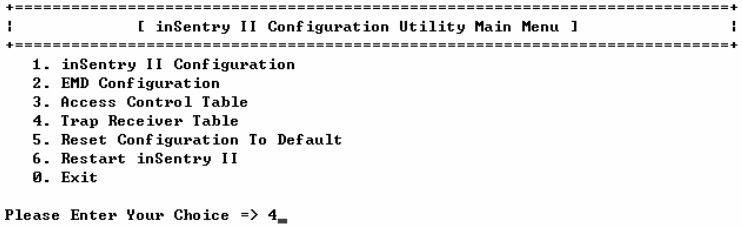


Figure 3-20 Select trap receiver table

To use a workstation and perform the SNMP manager 'trap' function in order to manage the EMD through the inSentry II, the IP address of the workstation must be added to the inSentry II list.

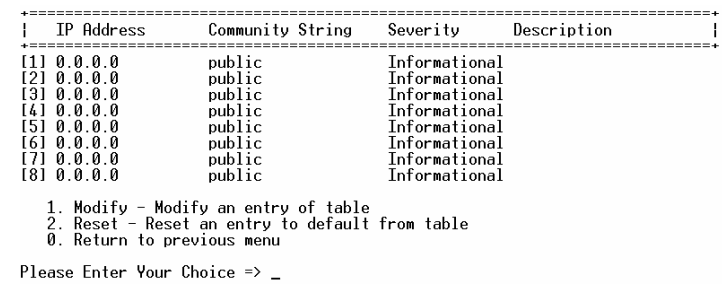


Figure 3-21 Trap receiver table

3.1.5 Resetting Configuration to Default

To reset the inSentry II configuration to default, press **5** from the main menu. Then press **y** to confirm.

```
+=============================================================================+
¦             [ inSentry II Configuration Utility Main Menu ]                 ¦
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => 5_
```

Figure 3-22 Select reset configuration to default

3.1.6 Restarting inSentry II

To restart the inSentry II, press **6** from the main menu. Then press **y** to confirm.

```
+=============================================================================+
¦             [ inSentry II Configuration Utility Main Menu ]                 ¦
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => 6_
```

Figure 3-23 Select restart inSentry II

3.1.7 Exiting inSentry II Console Configuration

After configuration is complete, press **0** from the main menu to end the console connection. Rebooting the inSentry II is not necessary.

```
+=============================================================================+
¦             [ inSentry II Configuration Utility Main Menu ]                 ¦
+=============================================================================+
   1. inSentry II Configuration
   2. EMD Configuration
   3. Access Control Table
   4. Trap Receiver Table
   5. Reset Configuration To Default
   6. Restart inSentry II
   0. Exit

Please Enter Your Choice => 0_
```

Figure 3-24 Select exit

3.2 Configuring inSentry II via Telnet

When you have installed the inSentry II via LAN (refer to Chapter 2.2), you can configure the inSentry II via Telnet by the following steps.

1. Make sure you have a PC with the TCP/IP network installed.
2. Run command shell (i.e. Windows MS-DOS prompt).
3. The inSentry II will initially try to acquire an IP address from the DHCP network service on the network, if available. You can also login the inSentry II by the console connection, and obtain the IP address in the inSentry II "Configuration/ System Group" section (see Chapter 3.1.1.1).
4. Type "Telnet < *inSentry II IP address*>" and press **Enter**.
5. From this point, the configuration procedures are the same as the configuration via RS-232 serial port. Refer to Chapter 3.1 for more information.

Note: If there is no DHCP network service on the network, contact your network administrator to get an IP address for your inSentry II and set the IP address to your inSentry II. If the administrator gives you the same IP address as inSentry II's default IP address, you can omit setting the IP address for inSentry II. The default IP address of the inSentry II is 192.168.*XXX*.*ZZZ* where *XXX* and *ZZZ* is the last two pairs of the MAC address of the inSentry II in decimal.

4 Managing inSentry II via Web Browser

4.1 Manipulating Network Routing Table in Windows

Normally, if the workstation and the inSentry II are in the same subnet, you can access the inSentry II directly by the web browser installed on the workstation. If not, follow the steps below to use the “route add” command to manipulate the network routing table in your workstation.

1. Procure a workstation (with Microsoft Windows 95, 98, ME, NT4.0, 2000, or XP installed) and set up the TCP/IP protocol, if necessary.
2. Run command shell (i.e. Windows MS-DOS prompt).
3. Enter the following command to add a routing condition: **route add <inSentry II IP> <workstation IP>**, e.g., “route add 172.17.7.18 210.67.192.147”, and press **Enter**.

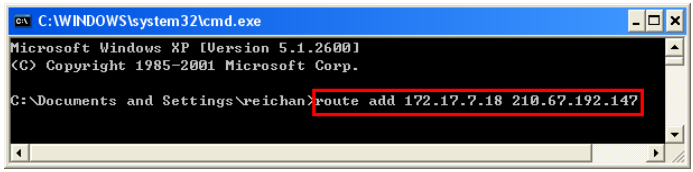


Figure 4-1 Add a routing condition in command shell

Note: The default IP address of the inSentry II is 192.168.*XXX*.*ZZZ* where *XXX* and *ZZZ* are the last two pairs of the MAC address of inSentry II in decimal. For example, if the inSentry II MAC address = 00 E0 D8 04 0A 15, the IP = 172.17.10.21. Please refer to the Windows manual for detailed information on how to add a routing condition to the workstation.

4. Open a web browser and enter the IP address of the inSentry II.
5. The Summary page displays. Click the **Help** icon located on the top right hand corner of each page for detailed description.

Figure 4-2 Click the Help icon to view online help

4.2 Initial Configuration

The first time you access the inSentry II via the web browser, please follow the steps below to configure the basic settings.

1. Go to “Network/ Configuration” section. Click the **Become Administrator** button at the bottom of the screen. Enter the default login name (**inSentry II**) and password (**admin**). The login name and password are case-sensitive.
2. Modify the inSentry II IP address, gateway, and subnet mask if necessary (see Chapter 4.5).
3. Click the **Set Value** button to save the changes.
4. Go to “System/ Date and Time” section and enter the date and time settings (see Chapter 4.6.2).

5. Click the **Set Value** button to save the changes.
6. Go to “Network/ Control” section to enable or disable the network protocols (see Chapter 4.5.2). Click the **Set Value** button to save the changes.

4.3 Monitoring

There are three sub-menus in the monitoring section- Summary, Identification, and Alarms.

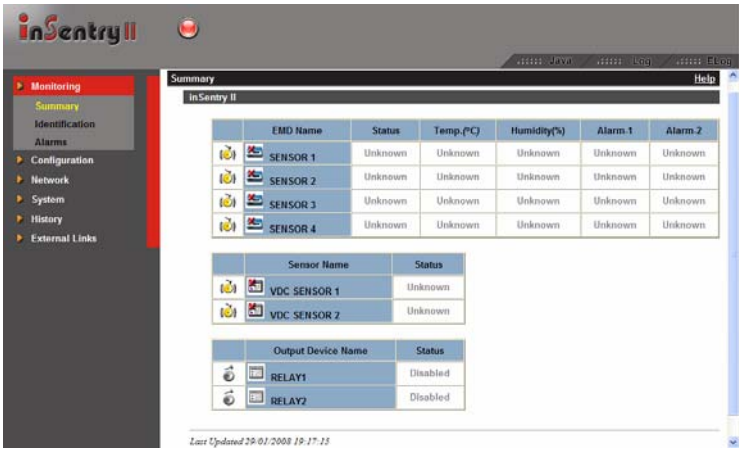


Figure 4-3 Monitoring-Summary screen

4.3.1 Summary

The Summary page displays the information of all the sensors and output devices connected to the inSentry II. This page is the default home page of the inSentry II. A summary of all the devices connected to the inSentry II is presented. The parameters are updated automatically every 5 seconds.

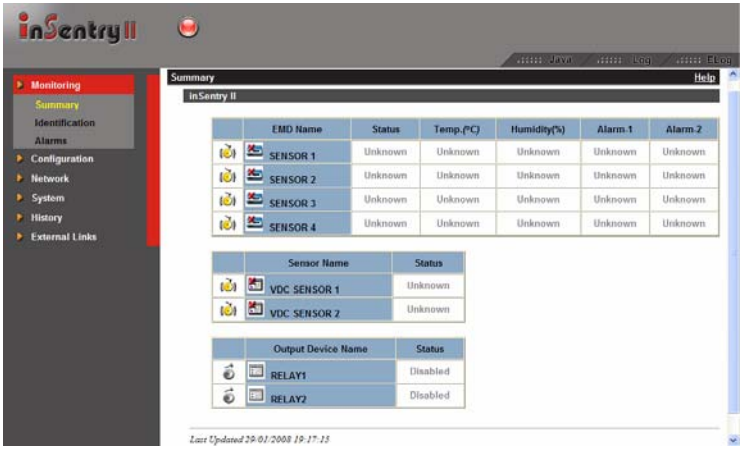


Figure 4-4 Summary screen

4.3.2 Detail View

Click the icons or on the Summary page to enter the Detail View page of the sensor or output device. This page provides the detailed information of the device. The parameters are updated automatically every 5 seconds.

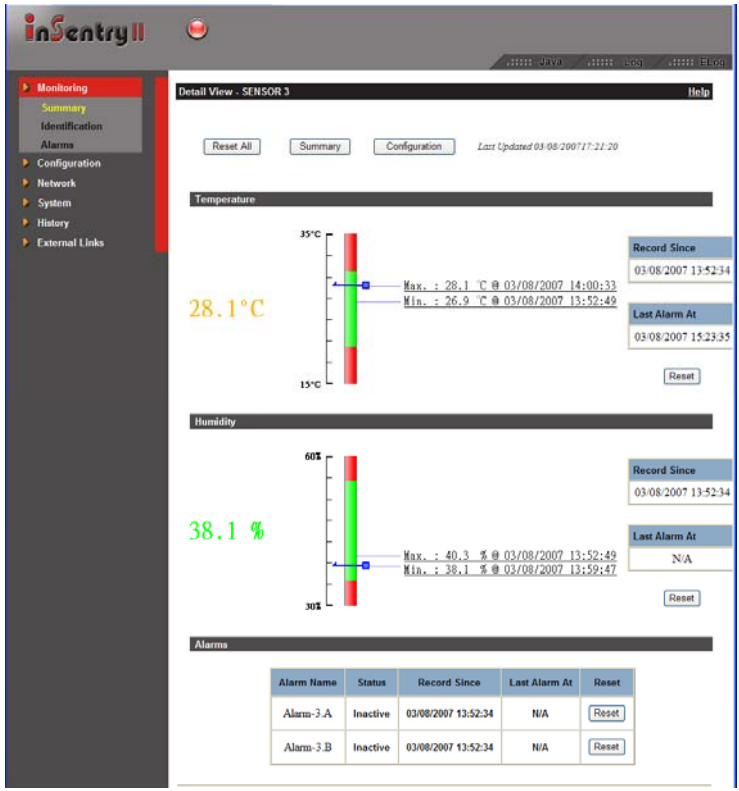


Figure 4-5 Detail View screen

4.3.3 Identification

This page provides the general inSentry II identification information. All the information in this page is read-only.

Figure 4-6 Identification screen

4.3.4 Alarms

This page shows the number of currently active alarms, alarm time, and alarm description. All the information in this page is read-only. This page will refresh automatically. You can access this page by clicking the icon on the Summary page or the icon on any web page of the inSentry II.

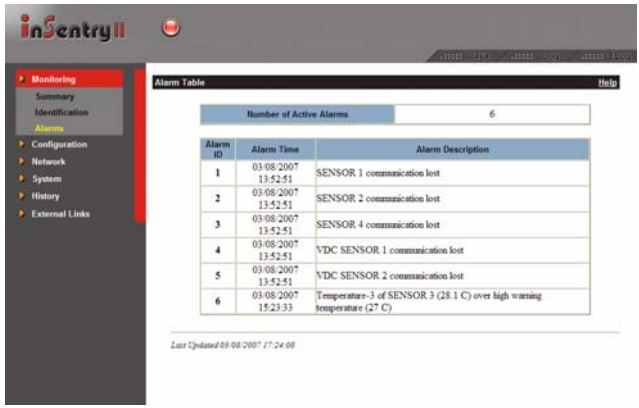


Figure 4-7 Alarm table

4.4 Configuration

This section is provided for the configuration of EMD sensors, VDC sensors, and output controls connected to the inSentry II.

4.4.1 Sensor

The administrator can configure the EMD settings and alarm schedule for four EMDs (maximum) in this section.

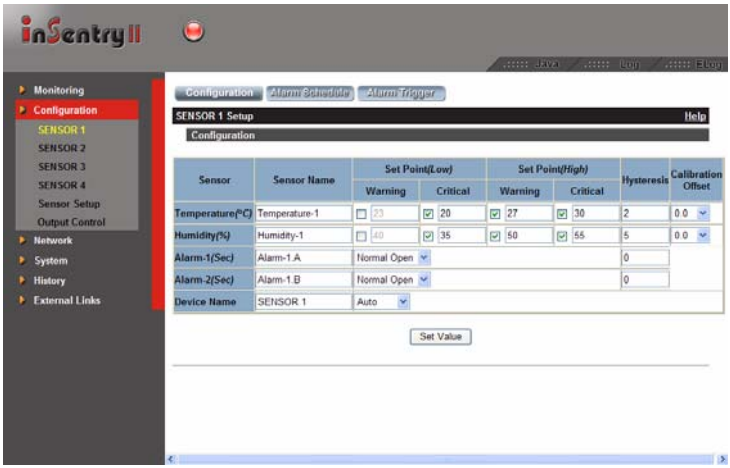


Figure 4-8 Sensor 1 screen

4.4.1.1 Configuration

This page allows the administrator to configure all necessary parameters of an EMD.

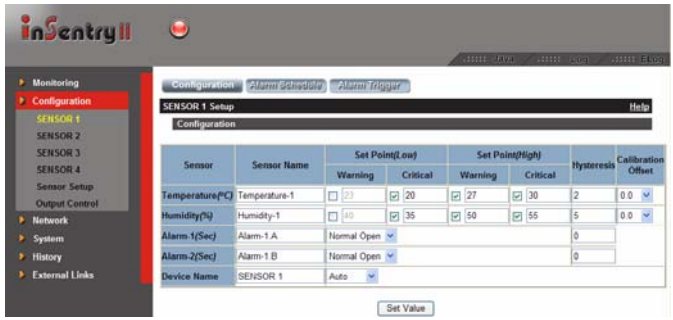


Figure 4-9 Sensor 1 configuration screen

4.4.1.2 Alarm Schedule

This page allows the administrator to configure all necessary schedules of disabling the EMD alarms, and disable the alarm by choosing the alarm type.

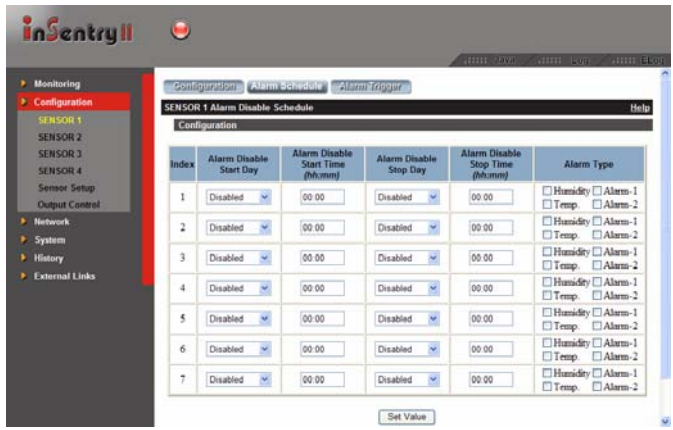


Figure 4-10 Sensor 1 alarm schedule screen

4.4.1.3 Alarm Trigger

This page allows the administrator to configure the alarm trigger of the outputs.

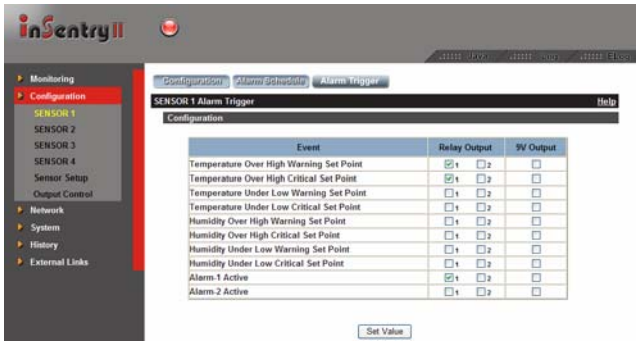


Figure 4-11 Sensor 1 alarm trigger screen

4.4.2 Sensor Setup

4.4.2.1 Configuration

This page allows the administrator to configure the settings of VDC sensors and water leak sensor or 9V output device.

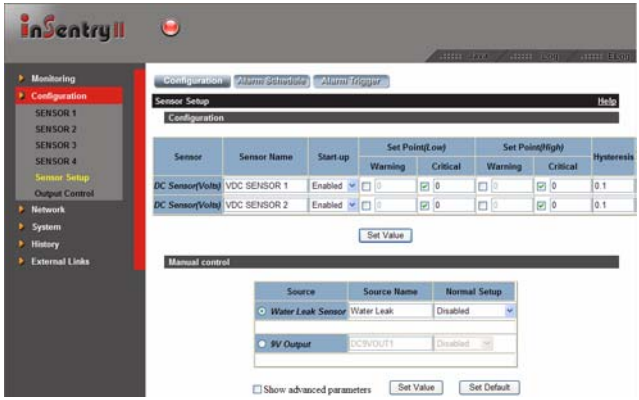


Figure 4-12 Sensor setup configuration screen

4.4.2.2 Alarm Schedule

This page allows the administrator to configure all necessary schedules of disabling the VDC sensors and water leak sensor or 9V output device. The administrator can disable the alarm by choosing the alarm type.

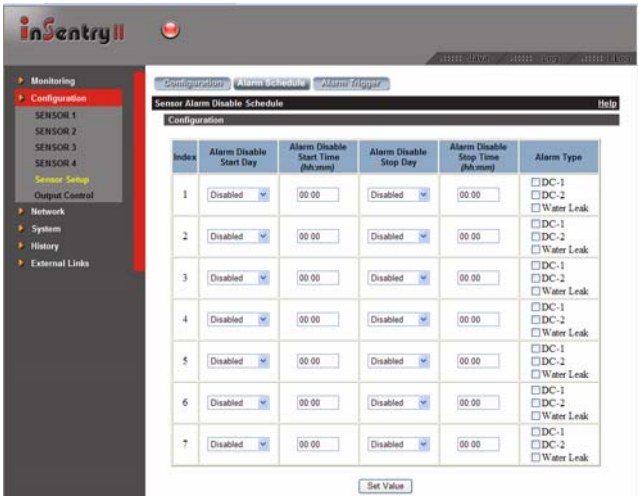


Figure 4-13 Sensor setup alarm schedule screen

4.4.2.3 Alarm Trigger

This page allows the administrator to configure the alarm trigger of the outputs.

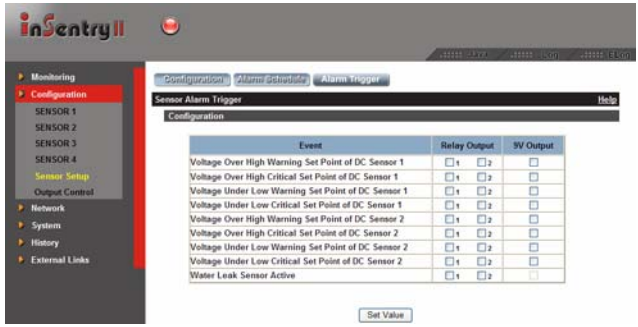


Figure 4-14 Sensor setup alarm trigger screen

4.4.3 Output Control

This page shows the status of output devices and allows the administrator to configure the device name and the normal status when the system starts up, and to turn the device on or off manually.

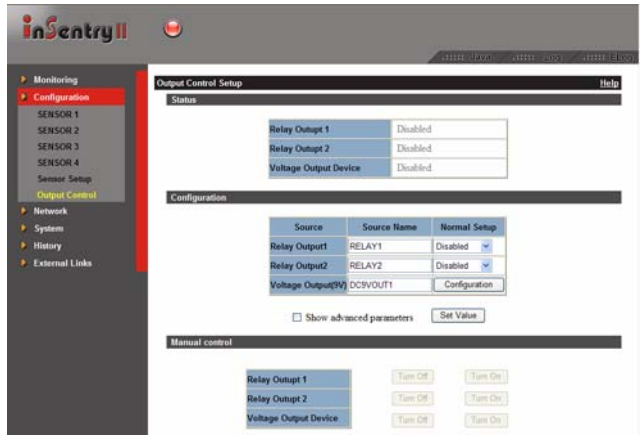


Figure 4-15 Output control setup screen

4.5 Network

4.5.1 Configuration

This page allows the administrator to set the IP address, gateway, subnet mask, and DNS address of the inSentry II.

Figure 4-16 Network configuration screen

4.5.2 Control

This page allows the administrator to enable or disable the communication protocols available in the inSentry II, or assign a different port number for the communication protocol. You can also click the **Reset to Default** button to reset the configuration of the inSentry II, or click the **Restart inSentry II** button to restart the inSentry II.

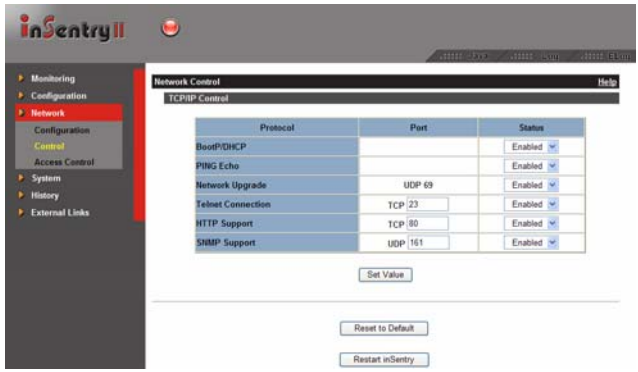


Figure 4-17 Network control screen

4.5.3 Access Control

This page displays a list of the NMS stations specified for read-only, read/ write, or restricted access to the inSentry II.

Figure 4-18 Network access control screen

4.6 System

4.6.1 Configuration

This page allows the administrator to set the system configuration.

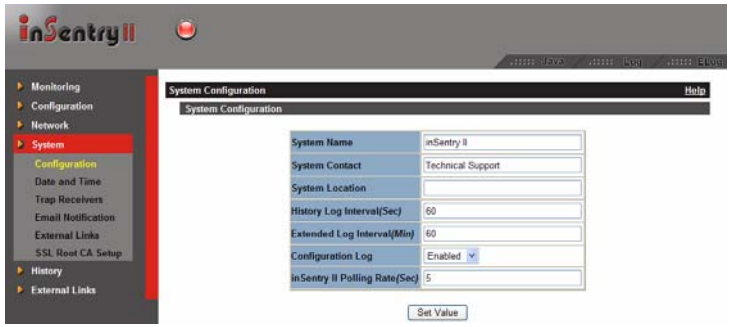


Figure 4-19 System configuration screen

4.6.2 Date and Time

This page allows the administrator to set the date and time of the inSentry II manually or synchronize the settings with the computer time or an NTP server.

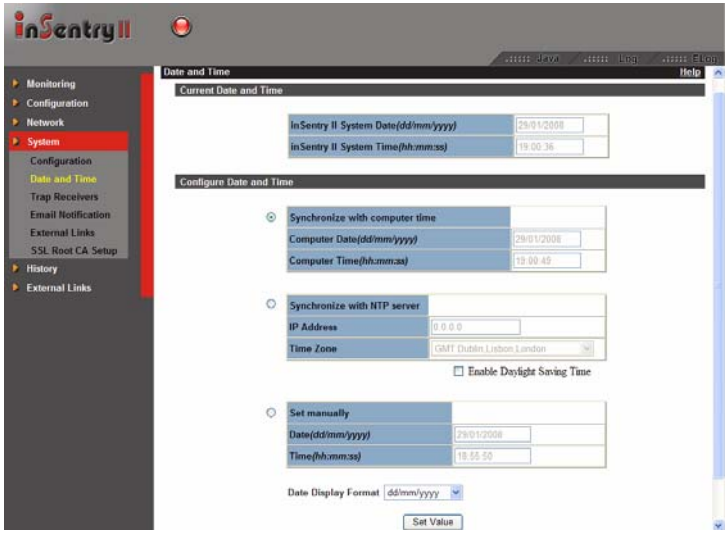


Figure 4-20 System date and time screen

4.6.3 Trap Receivers

This page lists the parameters for SNMP trap receivers (for SNMP Network Management). You can modify the settings of trap receivers in this page.

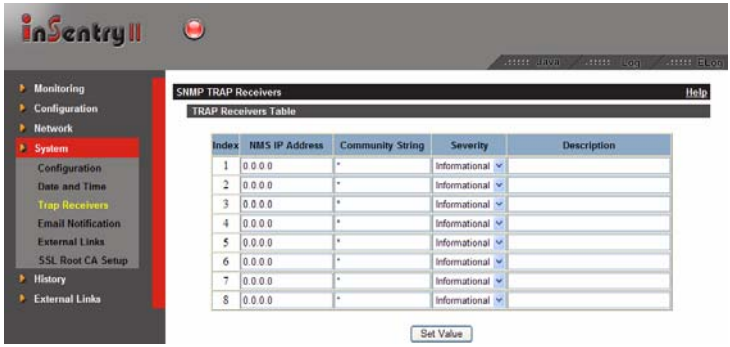


Figure 4-21 Trap receivers screen

4.6.4 Email Notification

This page allows the administrator to configure the mail server and mail receiver settings to send and receive alert emails when an event occurs. After setting up the mail server and receiver, you can click the **Send Test** button to make sure your email system is working properly.

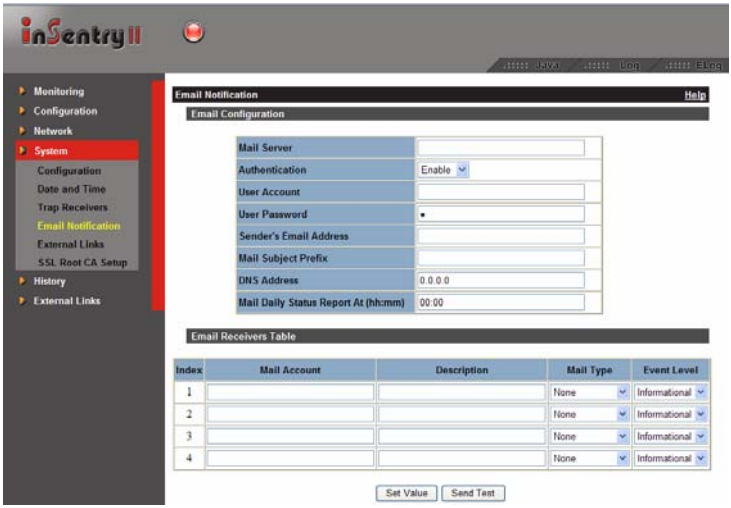


Figure 4-22 Email notification screen

4.6.5 External Links

You can specify up to ten links in this page. Each link can be configured to an external web page, such as another inSentry II or Technical Support home page. The links will appear under the “External Links” menu on the left.

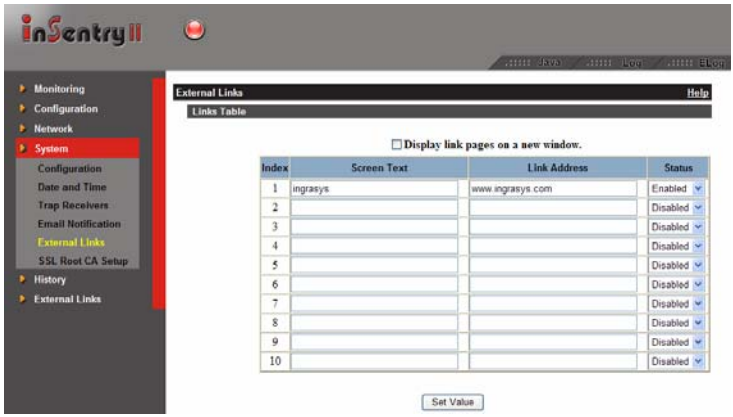


Figure 4-23 External links setup screen

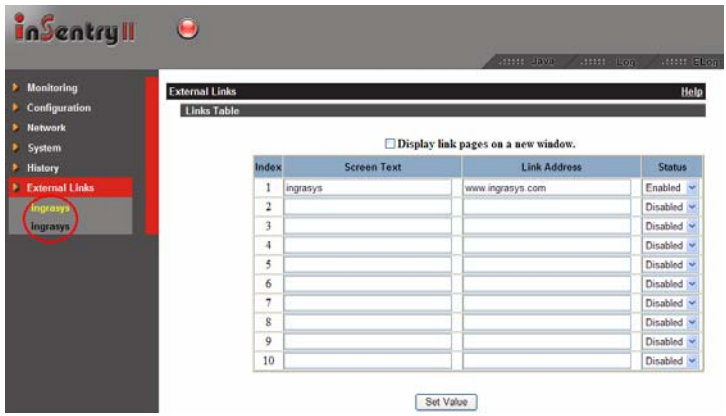


Figure 4-24 The links appear on the left menu

4.6.6 SSL Root CA Setup

You can download the Root CA certificate of the inSentry II and the Root CA certificate of the inSentry II for Java plug-in. The inSentry II Root CA self-signed certificate contains the inSentry II Root CA public key. Installing the inSentry II Root CA prevents the browser from prompting for CA confirmation when opening the inSentry II pages with HTTPS.

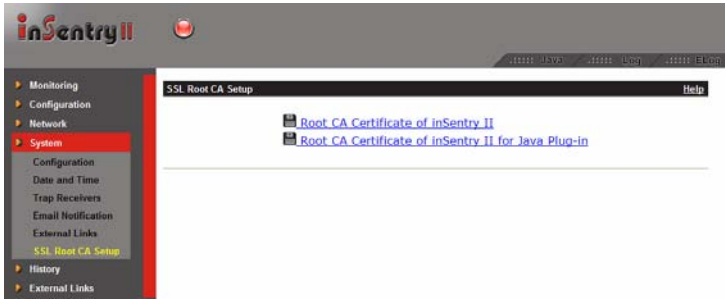


Figure 4-25 SSL Root CA setup screen

4.7 History

4.7.1 History Log

This page gives a snapshot of all the fundamental EMD parameters. The existing values will be overwritten when the maximum number of entries (rows) is reached. The administrator has the right to delete the table entries.

Note: To save the history log, please refer to Chapter 4.7.5.

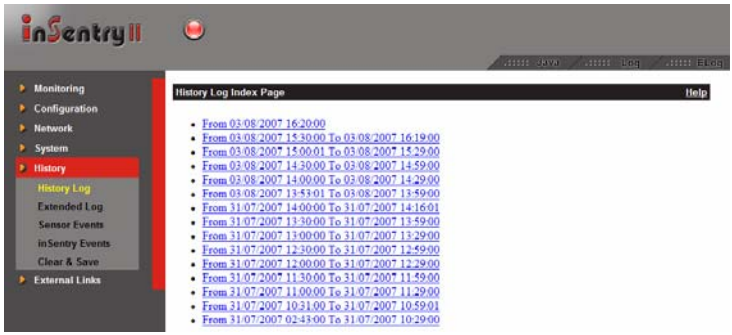


Figure 4-26 History log screen

History Log Data — Help

Log Date (dd/mm/yyyy)	Log Time (hh:mm:ss)	Temperature-1 (°C)	Temperature-2 (°C)	Temperature-3 (°C)	Temperature-4 (°C)	Humidity-1 (%)	Humidity-2 (%)	Humidity (%)
03/08/2007	16:20:00			28.1				38.1
03/08/2007	16:21:00			28.1				38.1
03/08/2007	16:22:00			28.1				38.1
03/08/2007	16:23:00			28.1				38.1
03/08/2007	16:24:01			28.1				38.1
03/08/2007	16:25:00			28.1				38.1

Figure 4-27 History log data

4.7.2 Extended Log

This page gives a consolidated view of the EMD, sensor, and output device parameters taken over a period. The minimum, maximum and the average values of temperature, humidity, and voltage are shown.

Note: The administrator can change the consolidation interval by changing the value of the Extended Log Interval in “System/ Configuration” page. The existing logs will be overwritten when the maximum number of entries is reached.

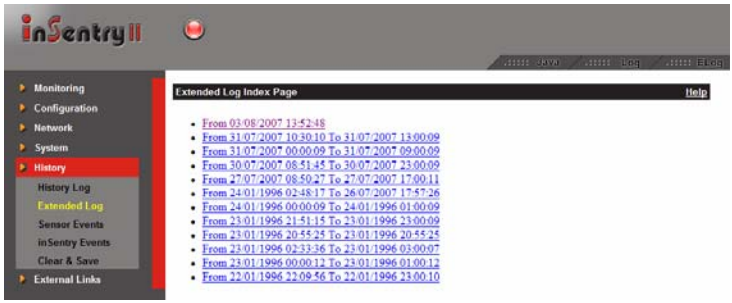


Figure 4-28 Extended log screen

Extended Log Data — Help

Start Date (dd/mm/yyyy)	Start Time (hh:mm:ss)	End Date (dd/mm/yyyy)	End Time (hh:mm:ss)	Temperature-1(°C)			Temperature-2(°C)			Temperature-3(°C)			Temperatu	
				min	avg	max	min	avg	max	min	avg	max	min	avg
03/08/2007	13:52:48	03/08/2007	14:00:01							26.9	27.6	27.9		
03/08/2007	14:00:05	03/08/2007	15:00:04							27.9	28.0	28.1		
03/08/2007	15:00:09	03/08/2007	16:00:05							28.1	28.1	28.1		
03/08/2007	16:00:09	03/08/2007	17:00:04							28.1	28.1	28.1		

Figure 4-29 Extended log data

4.7.3 Sensor Events

This page lists all the sensor events. The logs will be overwritten when the maximum number of entries (rows) is reached.

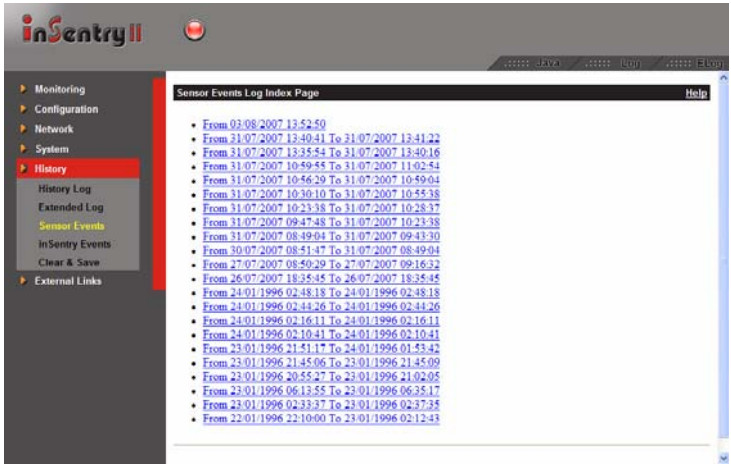


Figure 4-30 Sensor events screen

Sensor Events Log Data — Help

Date *(dd/mm/yyyy)*	Time *(hh:mm:ss)*	Event Description
03/08/2007	13:52:50	SENSOR 1 communication lost
03/08/2007	13:52:50	SENSOR 2 communication lost
03/08/2007	13:52:50	SENSOR 4 communication lost
03/08/2007	13:52:50	VDC SENSOR 1 communication lost
03/08/2007	13:52:50	VDC SENSOR 2 communication lost
03/08/2007	15:23:33	Temperature-3 of SENSOR 3 (28.1 C) over high warning temperature (27 C)

Figure 4-31 Sensor events log data

4.7.4 inSentry II Events

This page lists all the inSentry II events. The administrator has the right to delete the entries.

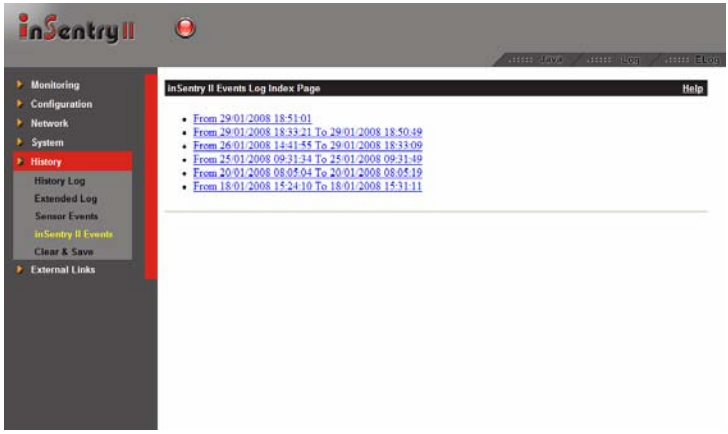
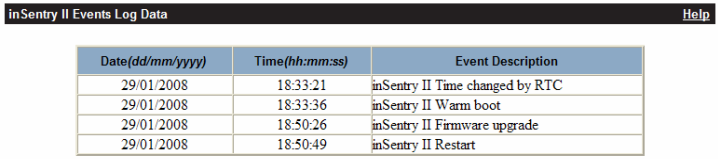


Figure 4-32 inSentry II events screen



Date*(dd/mm/yyyy)*	Time*(hh:mm:ss)*	Event Description
29/01/2008	18:33:21	inSentry II Time changed by RTC
29/01/2008	18:33:36	inSentry II Warm boot
29/01/2008	18:50:26	inSentry II Firmware upgrade
29/01/2008	18:50:49	inSentry II Restart

Figure 4-33 inSentry II events log data

4.7.5 Clear & Save

To save the inSentry II log data to a file in Microsoft Excel format, click the links under the **Save Log Data** section. You can also clear the log data in this page.

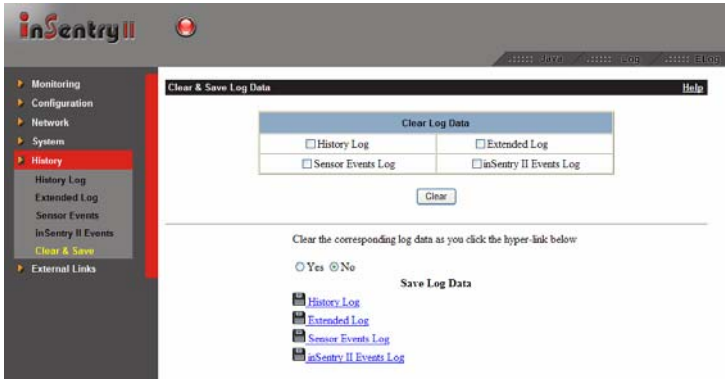


Figure 4-34 Clear and save log data screen

5 Monitoring inSentry II via Java Monitor

The inSentry II provides three real-time graphical user interfaces, **Java Monitor**, **History Log Monitor**, and **Extended History Log Monitor**, written in Java applet to give user an alternative way to monitor the sensors or output devices in LAN or WAN.

5.1 Java Monitor

Click the Java button

on the top right-hand corner on the inSentry II home page to display the Java Monitor. Java Monitor provides a graphical view of all the principle sensor parameters for the sensor being monitored. The most updated event logs are shown at the bottom of this page.

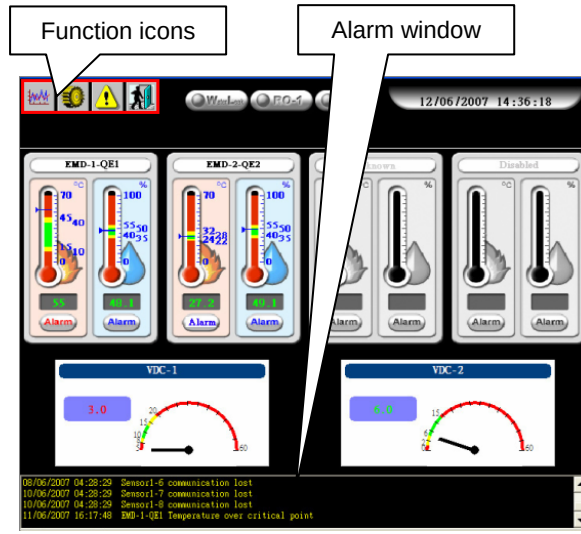


Figure 5-1 Java Monitor screen

Function Icons

	Display switch-Two display styles (gauge or overall chart presentation) can be selected. This icon is used to switch the display of the device parameters from gauge presentation to chart presentation and vice versa.
	Poll Rate- Configure the time interval that the Java Monitor retrieves the value of the devices. The default setting is 5 seconds.
	Event Message- Enable and disable the pop-up display of the warning messages.
	Exit- Exit the Java Monitor.

Alarm Window

When changes are detected in the system configuration or in the status of the connected sensors, the inSentry II displays a specific message in the Alarm Window. This type of status change message is an alarm.

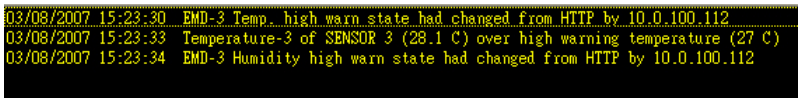


Figure 5-2 Alarm Window

5.2 History Log Monitor

Click the button

on the top right-hand corner on the inSentry II home page to display the EMD History Log Monitor. The EMD history log is presented in line graph. By default, all the EMD parameters will be shown on the same graph. You can select any combination of the parameters to be displayed by checking the check box next to each parameter on the monitor screen. Click the **Refresh** button at the bottom of the page to apply the changes.

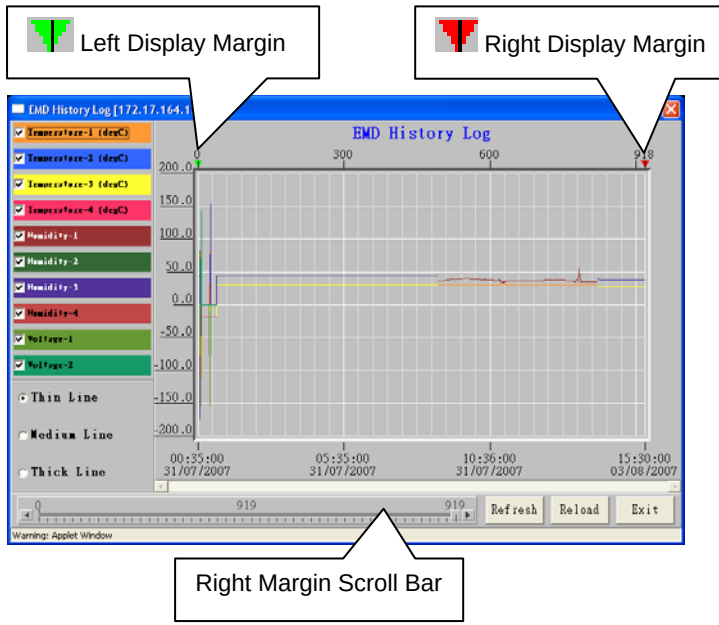


Figure 5-3 History Log Monitor screen

Line style	Select **Thin Line**, **Medium Line**, or **Thick Line** for the line style of the graph. Click the **Refresh** button to apply the changes.
Refresh	Click the **Refresh** button to apply the changes made to the parameters.
Reload	Update the monitor and reset the right display margin.
Exit	Close the window.

5.3 Extended History Log Monitor

Click the button

on the top right-hand corner on the inSentry II home page to display the EMD Extended History Log Monitor. This monitor shows the EMD extended history log in line graph. By default, all the EMD parameters will be shown on the same graph. You can select any combination of the parameters to be displayed on the graph by checking the check box next to each parameter on the monitor screen. Click the **Refresh** button to apply the changes.

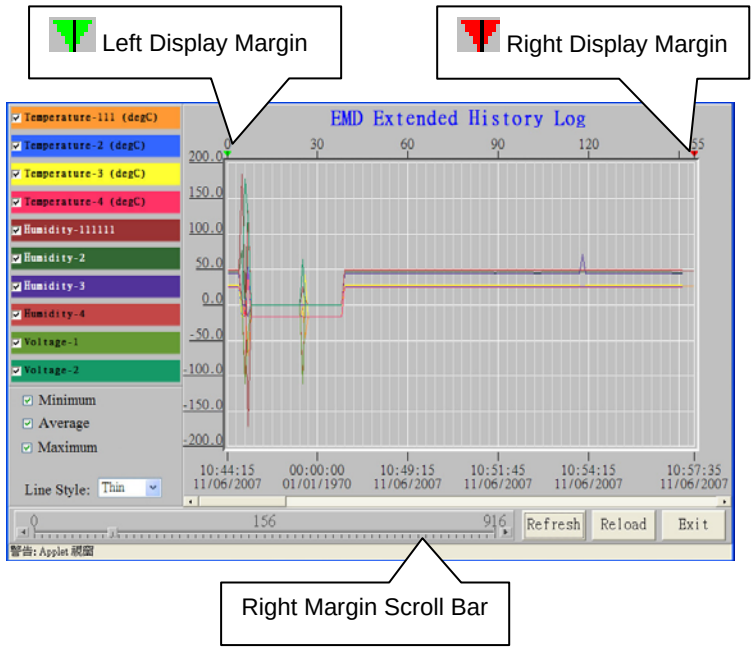


Figure 5-4 Extended History Log Monitor screen

Minimum	Display the minimum values of the temperature, humidity, or voltage of the EMDs, sensors, and the output devices.
Average	Display the average values of the temperature, humidity, or voltage of the EMDs, sensors, and the output devices.
Maximum	Display the maximum values of the temperature, humidity, or voltage of the EMDs, sensors, and the output devices.
Line style	Select **Thin Line**, **Medium Line**, or **Thick Line** for the line style of the graph. Click the **Refresh** button to apply the changes.
Refresh	Click the **Refresh** button to apply the changes made to the parameters.
Reload	Update the monitor and reset the right display margin.
Exit	Close the window.

6 Managing inSentry II via SNMP

To manage your inSentry II or EMD via SNMP NMS (Network Management Station), you may want to customize some of the SNMP settings (such as system name, system contact and system location).

Note: Before using the inSentry II in SNMP environment, the IP address and the gateway must be configured properly. See Chapter 4.5 for details.

6.1 Setting SNMP Access Control

The inSentry II supports SNMP protocol. You can use SNMP NMS to manage EMD through the network. The IP address of the workstation must be entered in the inSentry II write access table to prevent unauthorized users from configuring the inSentry II via HTTP or SNMP protocols.

Note: If you do not specify the IP address of the workstation in the Access Control Table (via serial port or Telnet) or the SNMP/HTTP Access Control (via web browser) in the inSentry II, you can only view the EMD status from the SNMP, and will not be able to perform any configuration on the inSentry II or the EMD. (See Chapter 3.1.3 “Setting Access Control Table” and Chapter 4.5.3 “Access Control” for details.)

6.2 Setting SNMP Trap Receiver

To configure the SNMP trap receiver setting, please access the inSentry II via web browser and go to the “System/ Trap Receivers” page (see Chapter 4.6.3).

6.3 Setting up SNMP Manager Software

Follow the steps below to set up SNMP manager software:

1. Add the MIB file in the inSentry II CD-ROM to the MIB database of the SNMP manager.
2. Search for the inSentry II in the network.
3. To access the inSentry II SNMP agent, use ‘public’ for the GET community string, and use the read/ write password (default is **admin**) for the SET community string.

   GET community string: **public**
   SET community string: **admin**

For more information, please refer to the MIB file on the inSentry II CD-ROM.

Appendix A. Technical Information

A1 DIP Switch Definition

Figure A-1 DIP switch

SW1	SW2	Function Mode
ON	ON	Manufacture Diagnostic Mode
ON	OFF	Reserved
OFF	ON	Reserved
OFF	OFF	Operating Mode

A2 DC Input Definition

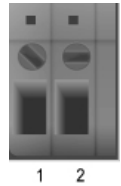


Figure A-2 DC input

Pin	Signals	Function	Note
1	GND	Ground	
2	DC_Source	DC+ Input	DC 12V~60V

A3 Sensor Connectors Definition

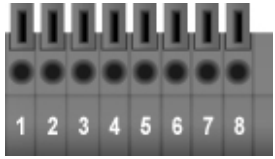


Figure A-3 Sensor connectors

Pin	Signal	Function	Note
1	DC_GND	DC Sensor 1 Ground	
2	+DC_IN1	DC Sensor 1	Range: 0-60VDC
3	DC_GND	DC Sensor 2 Ground	
4	+DC_IN2	DC Sensor 2	Range: 0-60VDC
5	VO_RY0	1st Relay Out	Max. 24VDC 1A
6	VI_RY0	1st Relay In	Max. 24VDC 1A
7	VO_RY1	2nd Relay Out	Max. 24VDC 1A
8	VI_RY1	2nd Relay In	Max. 24VDC 1A

A4 Serial Cable Definition

The cable for EMD ports of the inSentry II (straight-through CAT5 network cable).

RJ45	RJ45	Color
1	1	White/ Orange
2	2	Orange
3	3	White/ Green
4	4	Blue
5	5	White/ Blue
6	6	Green
7	7	White/ Brown
8	8	Brown

Note: The maximum length of the cable is 20m/ 65.6ft.

The cable for EMD-1 port (COM port) of the inSentry II (PC cable).

RJ45	DB9 (Female)	Description
1	-	Not connected
3	2	Received Data from PC
4	5	Signal Ground
5	Case GND	Chassis Ground
6	3	Transmitted Data to PC
8	-	Not connected

Note: Pins 2 and 7 of the RJ45 connector are connected internally.

Appendix B. Firmware Upgrade

B1 General Information

To perform firmware upgrade, the inSentry II must be connected to the same network as the workstation from which the file is to be sent. In the inSentry II “Network/ Control” page, enable the **Network Upgrade** option and make sure you have the read/ write authority to access the inSentry II.

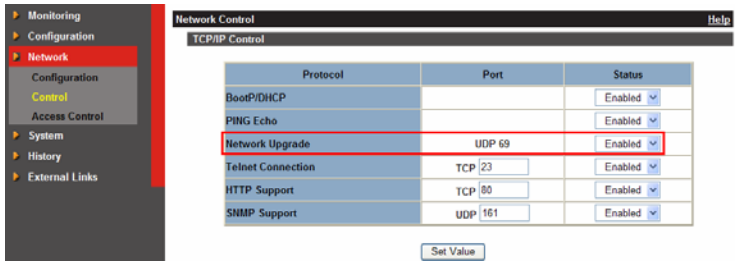


Figure B-1 Enable Network Upgrade

B2 Updating inSentry II Firmware from Windows 2000/ XP/ Vista

To perform firmware upgrade, run the **iupgrade.exe** program from the inSentry II CD-ROM. This program is compatible with Windows 2000/ XP and later operating systems.

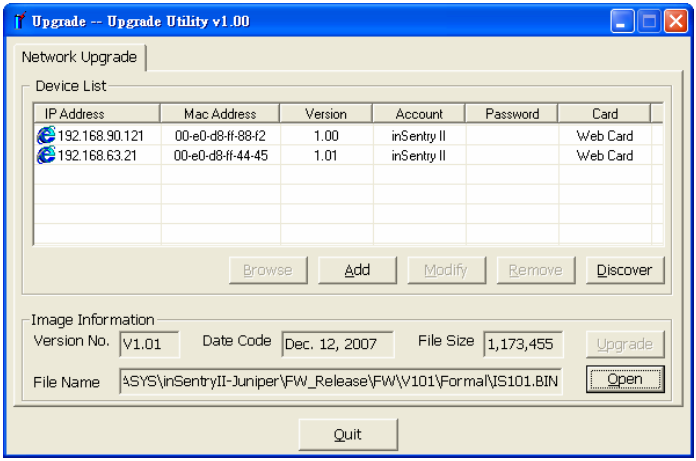


Figure B-2 iupgrade.exe program screen

1. **Sensor Device List:** Display the address of the inSentry II present in the local network.
2. **Discover:** Search for the inSentry II on the local network.
3. **Add:** Add the IP address of an inSentry II to the UPS List manually.
4. **Modify:** Modify the parameters of the inSentry II on the list.
5. **Upgrade:** Send the program loaded with the **Open** button to the selected inSentry II on the list.
6. **Open:** Open and load the new image file for upgrade.
7. **Remove:** Remove the selected inSentry II from the list.
8. **Quit:** Exit the program.